

**FOR DISCUSSION PURPOSES ONLY**

ATTORNEY DOCKET NO.: SP03-091

In the Claims

1. (Previously amended) A porous substrate comprising: a support; and an inorganic porous region on a surface of said support, the inorganic porous region having a surface capable of immobilizing probe molecules, the inorganic porous region having a tint and exhibits a reduced level of auto-fluorescence of at least about 15% relative to a comparable non-tinted porous substrate surface.
2. (Previously amended) The porous substrate according to claim 1, wherein said porous region having a tint that reduces relative auto-fluorescence levels by at least about 20% over said non-tinted porous substrate surface.
3. (Original) The porous substrate according to claim 2, wherein said porous region having a tint that reduces relative auto-fluorescence levels by at least about 50% over said non-tinted porous substrate surface.
4. (Cancelled)
5. (Original) The porous substrate according to claim 1, wherein said reduction in auto-fluorescence is over a wavelength range from about 400 nm to about 720 nm.
6. (Cancelled)
7. (Original) The porous substrate according to claim 1, wherein said tinted porous region has a colorant component including a transition metal ion.
8. (Currently amended) The porous substrate according to claim 1, wherein porous substrate consists essentially of:

|                  |       |
|------------------|-------|
| Oxide            | wt. % |
| SiO <sub>2</sub> | 53-67 |

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|                                |       |
|--------------------------------|-------|
| Al <sub>2</sub> O <sub>3</sub> | 3-10  |
| B <sub>2</sub> O <sub>3</sub>  | 12-24 |
| K <sub>2</sub> O               | 0-5   |
| MgO                            | 0-2   |
| CaO                            | 0.5-3 |
| SrO                            | 0-3   |
| BaO                            | 2-7   |
| Sb <sub>2</sub> O <sub>3</sub> | 0-2   |

and said tint includes at least one of Co<sub>3</sub>O<sub>4</sub> and NiO in the following weight percent:

|                                |        |
|--------------------------------|--------|
| Co <sub>3</sub> O <sub>4</sub> | 0.1-9  |
| NiO                            | 0.1-10 |

9. (Currently amended) The porous substrate according to claim 26, wherein said R is selected from the group consisting of Fe, V, and Cu.

10. (Currently amended) The porous substrate according to claim 1, wherein said inorganic porous region has a composition consisting essentially of:

| Oxide                          | wt. %    |
|--------------------------------|----------|
| SiO <sub>2</sub>               | 55-65    |
| Al <sub>2</sub> O <sub>3</sub> | 4-9      |
| B <sub>2</sub> O <sub>3</sub>  | 14-21    |
| K <sub>2</sub> O               | 1-5      |
| MgO                            | 0.1-2    |
| CaO                            | 1-2.5    |
| SrO                            | 0.5-1.75 |
| BaO                            | 3-5      |
| Sb <sub>2</sub> O <sub>3</sub> | 0-2      |
| R <sub>x</sub> O <sub>y</sub>  | 0-2      |

and said tint including at least one of Co<sub>3</sub>O<sub>4</sub> and NiO in the following weight percent:

|                                |       |
|--------------------------------|-------|
| Co <sub>3</sub> O <sub>4</sub> | 0.1-8 |
|--------------------------------|-------|

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Deleted: ¶  
Deleted: wherein said tinted inorganic porous region has a colorant component incorporated  
Deleted: a composition in  
Deleted: comprising at least one of the following either individually or in combination  
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and ¶  
¶  
wherein R is a transition metal, and x and y are each > 0, ¶  
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wherein R is a transition metal selected from the group consisting of Fe, V, and Cu, and x and y are each  $\geq 0$ .

Deleted:  $\geq$

Deleted: wherein said tinted inorganic porous region has a colorant component incorporated in a composition in weight percent comprising at least one of the following: either individually or in combination:

11. (Previously amended) The porous substrate according to claim 8, wherein said glass composition has a coefficient of thermal expansion (CTE) of between about  $35-44 \times 10^{-7}/^{\circ}\text{C}$ .

12. (Original) The porous substrate according to claim 11, wherein said glass composition has a CTE of about  $38-40 \times 10^{-7}/^{\circ}\text{C}$ .

13. (Previously amended) The porous substrate according to claim 1, wherein said tinted region has an average auto-fluorescence background for Cy3 and Cy5 channels of up to about 50% RFU of said un-tinted porous substrate.

14. (Original) The porous substrate according to claim 1, wherein a number of biological or chemical probes are attached at defined locations on or within said tinted porous layer.

15. (Original) The porous substrate according to claim 13, wherein said defined locations of probes assume a microarray format of at least one microspot per  $\text{cm}^2$ .

16. (Original) The porous substrate according to claim 13, wherein said defined locations of probes assume a microarray format of at least 10 microspots per  $\text{cm}^2$ .

17. (Original) The porous substrate according to claim 1, wherein said probe molecules include at least one kind of species selected from the following: oligonucleotides, nucleotides, nucleosides, DNA, RNA, peptide nucleic acid

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(PNA), peptides, polypeptides, protein domains, proteins, fusion proteins, antibodies, protein-membranes, G-coupled protein receptors, gangliosides, lipids, lipid membranes, cells or cell membranes, cell-lysate, or protein-small molecule ligands.

18. (Previously amended) A tool for performing biological or chemical assays, the tool comprises a non-porous support; and an inorganic porous region on a surface of said support, the inorganic porous region having a surface capable of immobilizing probe molecules, the inorganic porous region having a tint and exhibits a reduced level of auto-fluorescence of at least about 15% relative to a comparable non-tinted porous substrate surface.

19. (Previously amended) The tool according to claim 18, wherein said porous region having a tint that reduces relative auto-fluorescence levels by at least about 20% over said non-tinted porous substrate surface.

20. (Original) The tool according to claim 18, wherein said tinted porous region has a colorant component including a transition metal ion.

21. (Currently amended) The tool according to claim 18, wherein said inorganic porous region consists essentially of:

| Oxide                             | wt. %       |
|-----------------------------------|-------------|
| SiO <sub>2</sub>                  | 53-67       |
| Al <sub>2</sub> O <sub>3</sub>    | 3-10        |
| B <sub>2</sub> O <sub>3</sub>     | 12-24       |
| K <sub>2</sub> O                  | 0-5         |
| MgO                               | 0-2         |
| CaO                               | 0.5-3       |
| SrO                               | 0-3         |
| BaO                               | 2-7         |
| Sb <sub>2</sub> O <sub>3</sub>    | 0-2         |
| <u>R<sub>x</sub>O<sub>y</sub></u> | <u>0-10</u> |

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and at least one of  $\text{Co}_3\text{O}_4$  and  $\text{NiO}$  in the following weight percent:

|                         |        |
|-------------------------|--------|
| $\text{Co}_3\text{O}_4$ | 0.1-9  |
| $\text{NiO}$            | 0.1-10 |

~~Deleted: wherein said fired porous region has a colorant component incorporated in a composition in weight percent comprising~~

~~Deleted: the following either individually or in combination%~~

wherein R is a transition metal, and x and y are each > 0.

~~Deleted: and %~~  
 ~~$\text{R}_x\text{O}_y$~~

22. (Original) The tool according to claim 21, wherein said R is selected from the group consisting of Fe, V, and Cu.

23. (Original) The tool according to claim 18, wherein said probe molecules are biological or chemical molecules, including at least one kind of the following: oligonucleotides, nucleotides, nucleosides, DNA, RNA, peptide nucleic acid (PNA), peptides, polypeptides, protein domains, proteins, fusion proteins, antibodies, gangliosides, membrane proteins, lipids, lipid membranes, cellular membranes, cell lysates, oligosaccharides, or polysaccharides, or lectins.

24. (Currently amended) The porous substrate according to claim 1, said porous region further comprising pores having pore sizes of about 5  $\mu\text{m}$ .

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25. (Currently amended) The tool according to claim 18, wherein said porous region has pore sizes between about 0.5  $\mu\text{m}$  to about 1.0  $\mu\text{m}$ .

~~Deleted: greater~~

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26. (New) The porous substrate according to claim 8, further comprising a transition metal R alone or in oxide composition  $\text{R}_x\text{O}_y$  wherein x and y are each > 0.

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